Reconstructing Distance Education Training in the State of Utah: Connecting the Literature on Best Methods to the Development and Use of Training Podcasts

Names will be added later

Abstract: What happens when your distance learning training becomes outdated? How do you bring your content and methods current? How do you ensure your practice is solidly connected to theory? In 2007 this was the issue facing the Distance Learning Director at the State Office of Education in Utah. This paper documents research into the issues and the creation of new approaches for professional development of DL teachers. The state of Utah has over 400 distance education sites and its vast geography makes it difficult to visit DL teachers to maintain a training regime. A graduate student was awarded a USOE grant to conduct a literature review of distance learning. Research suggested Podcasts be used for professional development. Additional grants were awarded to two distance learning teachers and Westminster College (Salt Lake City, UT) to assist in preparing asynchronous "Podcasts" for professional development activities and discussions for Utah's DL teachers.

Description of Project

Over the past twenty years distance education (DL) has moved from an emphasis on merely copying regular classroom assignments and uploading them to the web to the regular use of very sophisticated dedicated teaching and learning platforms. From humble beginnings where pedagogical connections to any form of learning theory were not evident there have been strides toward linking what takes place in the distance learning format to a more theoretical base. To entertain a strong theoretical base for any new distance learning project is not however without some measure of risk to learners. Goldman (2004) cautions against making this effort, suggesting such a plan presumes little difference between the milieu of the traditional classroom and learning at a distance. Indeed Spector and de la Teja (2001) go even further suggesting that useful learning competencies for distance learning "are as fluid and dynamic as the emerging technologies, are difficult to pinpoint, and are largely dependent upon "relevant social contexts (p. 3)" . While much of the research on developing and maintaining social presence in the distance learning environment centers on online or web-based learning communities, recent trends indicate that Web 2.0 technologies are being used quite successfully in hybrid IVC environments (Mupinga, 2005; www.warwick.ac.uk) and are gaining wider acceptance. Research suggests that 2.0 technologies not only facilitate collaboration and cooperation (Manca and Delfino, 2007) but increase learner engagement and critical reflection (L'Bahy and Whitehouse, 2002); improve cognition (Mykota and Duncan, 2007; Beldarrian, 2007) promote relationships of reciprocity (Collins, 2000) and move traditional instruction from "independent learning to collective knowing" (McDuffie and Slavit, 2003, p. 6). In short, creating an effective pedagogy for use through distance learning is a daunting task fraught with concern about what students will "really" learn using this methodology.

Faced with the need to update training for Distance Learning teachers, one of the authors responsible for Distance Learning Education in the State of Utah, contacted staff of the Utah Education Network (UEN) in August of 2007 to begin an exploration of what new technology, methods, and knowledge was then available for a redesign of curriculum. UEN is the body charged with providing technology applications for teaching and learning for Utah schools. Also invited to this meeting was the second author whose interests lay in the design and development of instruction via the web. The authors had together with others developed a Distance Learning Endorsement for teachers in Utah and had a strong interest in ensuring the currency of their practice.

The initial meeting determined the following questions be answered before any new curriculum be developed. What technologies is the State working with right now that are being used in education? What new technologies are available? What new theory has emerged that might be an effective linchpin for design? Do secondary teachers need different resources than college students? How can secure testing be done in a distance learning environment? Additionally how do we ensure the several populations of "distance learners" be satisfied (Synchronous High School; Asynchronous High School; Synchronous Adult; and Asynchronous Adult learners)?

It became clear that we needed to conduct a literature review of current distance learning practices as well as new developments in linking distance learning to theory. It was decided to hire a graduate student to conduct a literature review on these topics. This was organized and the student Lisa Williamson, now graduated with a Master of Education degree, completed the review and is presenting it at this conference in concert with this paper. From

the literature review Lisa made recommendations of technologies and teaching techniques to the authors for consideration of incorporating into the new distance learning regime in Utah. These recommendations were reviewed and ultimately resulted in the creation a new distance learning training website and the development of the podcasts that now form a substantive portion of the base of training for distance educators in Utah public schools. The design of each podcast reflects an effort to strive for pedagogic excellence as suggested by Duderstadt (2007). Built into these designs is a real effort towards grounding practice in theory, and understanding and using technology to enhance learning. A particular effort was made to link the podcasts to the social-interaction theory and "situative" approach of Putnam and Borko (2000, p. 5). The anticipated outcome should as Beldarrain (2006) suggest, "swing… the pendulum toward the creation of new teaching models that afford more learner control" (p. 15).

Perhaps we should here explore why podcasts were chosen as a feature of the revised training curriculum. With a key focus for the revised distance learning training targeting asynchronous teaching podcasts emerged as suitable to the task with their structural capacity to reflect the use of many technologies for both teaching and learning. A podcast is essentially a digital construct that can easily be stored on a computer hard drive that can on demand be accessed through an MP3 player, an iPod, or any internet connected computer. As cited by Williamson, Griffey (2007) suggests:

> ...three key concepts to implementing podcasts: creating the content, distributing the podcasts, and aggregating and synching to iPods locally (p. 1). Rationales for podcast are many. They include: 1) teaching to multiple learning styles, 2) allowing for intensive review and skills reinforcement, 3) focusing on curriculum, 4) promoting 21st-century skills, 5) integrating easily into F2F instruction, 6) providing learners with smaller, more digestible chunks of information, and 7) providing content on-demand.

Podcasting should challenge "conventional notions" (p. 3) of knowledge construction (Reynard, 2008) and promote peer networking and input. Reynard also suggests that creative and innovative instructors "...should move beyond the obvious uses of podcasts, and take full advantage of the technology's "public nature" (p. 1) to create collaborative, contribution-oriented communities of highly engaged learners. New uses of podcasts in the classroom should never attempt to recreate the F2F classroom experience but should represent a change in teaching methods and learning outcomes, reflect the essence and capability of the technology itself, and appeal to today's learner."

There are detracting perspectives on the use of podcasts that suggest podcast use amounts to providing "a thin imitation for real instruction" (p. 3) rather than meaningful, value-laden instruction (Schnieder, 2006). The challenge then becomes for the practitioner of podcasts to demonstrate their commitment to the subject matter, to their students, and to learning, in order to preserve "the values that make information worth having" (p.3).

With these perspectives on podcast use it became clear to the authors that creating a valuable series of podcasts for distance learning training would require a great deal of effort in the design phase. At this time the graduate student was asked to develop a series of training exercises that could be reconstructed for podcasts use. While this endeavor was under way it became apparent that the website that would provide links to the various podcasts needed a complete overhaul to more accurately reflect the new training program. Work was commissioned to that end. The website has now been **r**efined and condensed into a much more user-friendly site. Navigation has been simplified with only the most relevant materials and resources present, it should here be mentioned that the State of Utah had already funded access for its schools and universities to iTunes University from where the podcasts in Distance Learning as well as the Utah Electronic High School can also be downloaded.

A large part of a podcast construct may well be the use of Web 2.0 technologies for the Internet Video Conferencing (IVC) classroom. Web 2.0 as Gutmans, (2006) explains, refers to a move away from a static model of web-based instruction towards a more interactive model where students can be engaged in editing, creating and contributing content, and interactively building social communities. It is now understood that the interactive nature of Web 2.0 technologies such as wikis, podcasts, social networking, text messaging and electronic discussion boards form a "contribution pedagogy" (Collis and Moonen, 2001) that leads to an enhanced social presence, and better learner engagement with peers, with the content, and with the instructor.

Technology can be more than a vehicle for teaching course-specific content. Goldman (2004) found that when teachers used technology to engage their learners to "think about their thinking" (p. 164), the classroom culture was transformed towards more equitable views of "gender, race, cultural, and age differences" (p. 164). Williamson (2008) cites McCurry (2003) who "posits that technology becomes truly transformative when it is driven by democratic ideals which favor "personal and social-problem solving, historical perspectives,

understanding power relationships, justice and equality, and cultural and human aesthetics" (p. 430). " In this milieu consideration should be given to what today's learners bring with them to the classroom. This Net Generation as Lankshear notes has "great enthusiasm for and enjoyment in learning a sense of comfort, achievement, and confidence . . . around a range of new technologies" (p. 101). Prensky goes further when he states that today's learners have grown up with technology, understand how to use it their ends and are often frustrated by their teachers inability to incorporate technology into their instruction. This may often lead to a disconnect between content delivered in the classroom and what the students area ware is really available to them if their teachers would simply embrace teaching with technology in the classroom. The suggestion we make here is that adapting Web 2.0 technologies into IVC classroom instruction will aid learning while building a more democratic and participative classroom.

As the training exercises were delivered, the authors in conjunction with two experienced distance learning teachers redesigned the content for delivery via podcast. This involved clarifying the exercise towards learning goals for multiple learning styles, creating a detailed storyboard of the plan of activity which included potential technologies to be used and finally developing a teaching script. At this juncture trial podcasts were created that included the first author as the instructional lead in the video. Though the outcome of early trials was not spectacular what was learned was that well designed content can be ineffective if flaws in the technical production of the podcast divert attention to the unwanted. In short a video of a poor presentation may cause more discussion on the nature of the presentation than the content of the presentation.

Though this is hardly a new finding it did provide impetus for more professional help in the technical creation of the podcasts. These, and other newly developed podcasts can be accessed at: http://www.schools.utah.gov/edtech/default.htm (Select EDNET/Resources/Podcasts), also (ITunesU K-12). Sample topics include "Turn to your Partner", "Teach to the Camera", "The IVC Classroom", "The "Teddy Bear Classroom", "Web 2.0 Technology in the Distance Learning Classroom", and "Teaching with ELMO."

The podcasts and new website are now being used as a central part of the training for distance learning educators in Utah. As this occurs participants will be asked to evaluate each podcast on its success for their preferred learning style. Periodically these evaluations will be examined seeking information that will result in exercise redesign for better learning gains. Such evaluation and redesign will be reported in a future presentation. Below are samples of the podcast guidelines, goals, and directions created together with some suggestions on best practice for each that emerged from our literature review and the development and creation of this project.

Podcast I: Turn to Your Partner

This is a fun, engaging assessment technique to determine your students' collective understanding of the course material. *Turn to Your Partner* is especially well-suited to the IVC classroom. Simply mute the system while paired teams work together.

1. Instructor poses a question about the material and asks students to individually reflect on and come up with an answer to the question.
   a. *Designed to test student understanding of a concept, their ability to reflect, and to demonstrate critical thinking.*
2. Students are then paired and asked to "turn to your partner."
   a. *Designed to emphasize development of a participatory democratic classroom while reducing student isolation.*
3. Answers are discussed and each pair comes up with a *new* answer to the original question.
   a. *Opportunity for learners to rethink their positions and gain new insights*
4. Instructor calls on pairs at random to share their collective answer.
   a. *Answering random questions is a necessary teaching skill. This assignment allows learners the opportunity to build this skill while strengthening their listening and verbal skills.*

Podcast II: The Eyes Have It: Teaching to the Camera

Teaching with IVC technology requires quite a few adjustments to your teaching style. One of the most important adjustments you can make is to "teach to the camera." That is, when responding to a student's question or

comment, you must *consciously* look directly into the instructor's camera. Your natural response will be to look *at* the monitor at the back of the classroom. Don't do it! When you look at the monitor, you will appear to your remote site students as looking off to the side. As awkward as it feels at first, a direct gaze into the instructor's camera will give the illusion that you are really "seeing" and connecting with your students.

Training yourself to "teach to the camera" communicates several things to your students: 1), that you're truly interested in their comments or questions, 2), that you're engaged and present as their instructor even if you aren't physically present in their classrooms, and 3), that your remote site students are as important and "real" to you as your on-site learners.

As a best practice for teaching via interactive video, "teaching to the camera" is sure to help remote site learners feel more included in your learning community. When you adjust your teaching style to "teach to the camera", chances are you will find your students are more engaged with learning, are more comfortable collaborating and working together with you and their peers, and may require less intervention for behavioral issues at remote learning sites.

Best Practices

1. Consciously think about making eye contact with every student, on or off site.
2. Treat the instructor camera as a student.
3. Look directly *into* the instructor camera (NOT at the monitor at the back of the classroom).
4. Divide your eye contact between the students at your location and the students at the remote sites. This helps remote site students feel they are part of the class.
5. Early on, train the students to "'communicate' with the camera, not just 'watch' video."
6. Ask quieter (shy) students to change seats so you can see them clearly on camera.
7. Call students by their names. Look directly into the camera.
8. Practice. Videotape a teaching session and review it. Ask for feedback from the off-site facilitators and/or your students.
9. Attach something to the instructor camera--a pair of googley eyes, a red feather--anything that will remind you to look directly *into* the instructor camera.

Podcast III: Using a Document Camera in an IVC Classroom

The ELMO document camera is a necessity for any distance classroom. An overhead projector with a camera attached, ELMO enables instructors to project images to local and remote learning sites. Printed materials, slides, and negatives can all be projected by the ELMO document camera. ELMO will also project any 3-D object as long as the object fits on ELMO's base

Research shows that students want and need visual material, especially when they are learning via IVC. Using well-designed visuals significantly improves instruction, retention, and levels of student interaction

Before creating or using any graphics, ask the following questions:

- What are the goals and objectives of the instructional materials?
- Who is the audience for the IVC class?
- What are some of the content issues?
- What is the purpose of the presentation, lecture or handout?
- How can I organize the content?

After answering these questions, follow these few basic ELMO guidelines to make sure your graphics (and lessons!) are engaging, effective, and memorable.

1. Storyboard your graphics first
    a. Come up with a title for your graphic
    b. List key words and ideas
    c. Create simple sketches that represent key words/ideas
    d. Transfer that idea to a graphic for ELMO!
2. Use a word processor , presentation software (PowerPoint) or large, dark-colored markers if designing your own slides
3. Background colors best suited for ELMO: buff, powder blue, and light pink. Avoid red-green.
4. Size matters!
    a. Use BOLD 36 font

5. No fancy stuff!
    a. Fonts should be sans serif.
    b. Helvetica, Arial or Calibri are fonts that work especially well in ELMO.
    c. Watch out for color distractions...use light letters against dark background, avoid red and green.
6. Use landscape format, not portrait. A 4 x 3 aspect ratio. Same shape as TV monitor
7. Text should be 1" tall for every 15' away from the TV monitor.
8. Remember the 6 X 6 rule
    a. 6 lines of text: 6 words per line.
9. The Glare Factor.
    a. Don't laminate. Watch out for shiny surface glare. Adjust lighting.
10. Use a heading on every slide.
11. Vary textual design. (*Don't know how? Enlist an expert. Ask one of your students for help.)*
    a. Tight Width.
    b. Drop Cap.
    c. Small Caps.
    d. Under shading for emphasis.
    e. Linking prefix.
12. Graphic Organizers are excellent for ELMO. Use graphic organizers to help your students:
    a. Problem-solve.
    b. Review material.
    c. Summarize.
    d. Structure writing.
    e. Plan.
    f. Research.
    g. Brainstorming, use software like Inspiration or listing comments

Podcast IV: Web 2.0 Technologies in the IVC Classroom

Since the inception of DE instruction, the idea that technology should be transparent in relation to instruction has prevailed. That is, the focus in the technology-mediated classroom should remain on the learning taking place, not the razzle and dazzle of the newest technology (Tripp, 2001; Willis and Lockee, 2008; Smyth, 2005). Recent research however challenges this notion of technology transparency. For example, Lankshear (2001) proposes that technologies become active agents or partners in the DE classroom. From this perspective, technologies are considered not as an add-ons or distractions, but as an "active participant" (p. 113) in the distance classroom in partnership with the instructor and the learners. Goldman argues convincingly that technology can be more than a vehicle for teaching course-specific content. Using digital media technology, Goldman found that when learners and teachers used technology to "think about their thinking" (p. 164) as a learning community, the culture of the classroom transformed into a more equitable space for "gender, race, cultural, and age differences" (p. 164). Similarly, McCurry (2003) posits that technology becomes truly transformative when it is driven by democratic ideals which favor "personal and social-problem solving, historical perspectives, understanding power relationships, justice and equality, and cultural and human aesthetics" (p. 430).

Clearly, approaching technology from this vantage point may require a huge paradigm shift, but it is a shift that more closely aligns with the lived experienced of today's Net Generation. Lankshear further notes that today's learners have "great enthusiasm for and enjoyment in learning a sense of comfort, achievement, and confidence . . . around a range of new technologies" (p. 101). Duderstadt (2007) concurs. He aptly observes that to resist technology in the classroom is futile as today's learners have "brought it with them" (p. 235). For the most part, today's generation of tech-savvy learners appear to move effortlessly between technologies; their frustration comes from waiting for us, their instructors, to catch up (Prensky, 2001)! Our job as distance educators is to catch up with new generations of learners for whom technology is no longer transparent but is a very real part of their existence, both inside and outside of the classroom. Adapting Web 2.0 technologies into IVC instruction may help smooth the transition from transparent to transformative.

Tip

When considering incorporating any new instructional technology to improve learning, ask yourself these questions:

How will this technology help my students learn and help me meet learning objectives?

What can I do with this technology that I cannot do without it? (Twigg, 2001)

Web 2.0

In layman's terms, Web 2.0 or 2.0 refers to a move away from static web-based or Internet use towards more interactive, dynamic, and democratic participation where end users (in this case, your students) edit, create and contribute content, and interact in social communities (Gutmans, 2006). Increasingly, the interactive nature of Web 2.0 technologies (i.e. wikis, podcasts, blogs, social networking, instant and text messaging, electronic discussion boards, etc.) as a model of "contribution pedagogy" (Collis and Moonen, 2001) have been show to markedly enhance social presence and learner/learner engagement, learner/content engagement, and engagement between learner/instructor. Emerging Web 2.0 strategies are presented here as possible strategies for a best practices model of distance instruction.

Social Presence

No review of distance teaching and learning would be complete without a discussion of social presence in the remote learning environment. Garrison (as cited in Manca and Delfino, 2007) defines social presence as "the ability of participants in a community of inquiry to project themselves socially and emotionally, as 'real' people (i.e., their full personality), through the medium of communication being used, and most distance education instructors will be intimately familiar with the term. While much of the research on developing and maintaining social presence in the distance learning environment centers on online or web-based learning communities, recent trends indicate that Web 2.0 technologies are being used quite successfully in hybrid IVC environments (Mupinga, 2005; www.warwick.ac.uk) and are gaining wider acceptance. Research suggests that 2.0 technologies not only facilitate collaboration and cooperation (Manca and Delfino, 2007) but increase learner engagement and critical reflection (L'Bahy and Whitehouse, 2002); improve cognition (Mykota and Duncan, 2007; Beldarrian, 2007) promote relationships of reciprocity (Collins, 2000) and move traditional instruction from "independent learning to collective knowing" (McDuffie and Slavit, 2003, p. 6).

If the thought of introducing CMC technology into your IVC classroom seems daunting or even superfluous, remember that today's Net Generation *do not* limit the definition of communication to F2F interaction. Communication for these sophisticated learners is not only a top priority, it is imperative (Oblinger, 2008).

Statistics

100% of online students communicate with others every time they log onto their learning management system.

70% check IM (Instant Messaging) the first thing after logging on.

Electronic Discussion Boards

The benefits of incorporating electronic or threaded discussions into your distance instruction are ample. In addition to extending F2F discussion, one of the best rationales for including threaded discussion is that it provides a safe forum for students to participant who might not normally be as active in your onsite or remote classrooms. McDuffie and Slavit (2003) observe that quieter students were recognized and given "prestige" (p. 10) when they were referenced in others' posts. Furthermore, students who typically contribute very little or not at all in the F2F classroom have been shown to contribute *significantly more* in threaded discussions. By providing learners with time to reflect on course material and a virtual forum to contribute to discussions in ways that are meaningful to them, feelings of community are nurtured and self-efficacy is enhanced.

As with most Web 2.0 technologies, monitoring an electronic discussion board requires some skill building. Salmon (as cited in Harris-John, 2003) suggests the technique of "weaving" (p. 1). Essentially, weaving a threaded discussion involves a single reply to several students based on the topic as well as the relationships created by students' postings. According to Salmon, weaving affords the instructor the opportunity to influence and guide the

direction of the discussions, as well as a chance to get to know the students on a more personal level. Weaving is also used to summarize main points proposed at a certain point in the discussion, as well as posing pertinent questions to generate further exploration. (Williamson, 2008)

Tip

Group remote site learners with on-site learners to create discussion threads. Each group is responsible for choosing a discussion topic, setting parameters of discussion participation (i.e. number of responses required, dates/times responses due, how long the thread will be active, and how student responses will be graded.)

Tips

1. Set conventions for topic postings.
2. Establish a word limit for posts.
3. Set up naming conventions for response threads (www.colostate.edu).
4. Provide examples of positive feedback or constructive criticism through "model" posts (McDuffie and Slavit, 2003).

Caution

Hands off! Too much involvement takes ownership away from students.

As these podcasts and others developed as part of this project are used for instruction of new DL teachers they will be accompanied by regular assessment as to the connect with the goals we had in mind in their creation. A database of this information will be kept to allow summative evaluation of the success of the DL program redesign and will be presented at a future conference.

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